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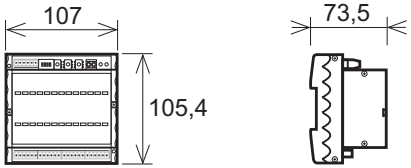
USER MANUAL

LL LED Z-POWER DRIVER

LL42 100 **LL42 200**

COMPLIMENTS ON YOUR PURCHASE!

All dimensions are in milimeters



Following items are included:

- LL LED Z-POWER DRIVER	1 pc.
- 6PIN LINE connectors	5 pcs.
- User manual	1 pc.

Additional items needed:

- Data cable
- DC power supply 24V

Content:

01 SAFETY INFORMATION
01.1 Safety instructions
01.2 Operating determinations
01.3 Fire prevention
02 PRODUCT SPECIFICATION
02.1 Technical Specification
02.2 Product labelling
03 INSTALLATION
03.1 Unpacking
03.2 Physical installation
03.3 Connecting to DC power supply
03.4 Installation factors
03.5 Connection to the DC power input
03.6 Connection possibility
03.7 DMX channels
04 MAINTENANCE AND SERVICE INSTRUCTIONS

ENVIRONMENT

Do not throw away the appliance with the normal household waste at the end of its life, but hand it in at an official collection point for recycling. By doing this, you help to preserve the environment.

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01 SAFETY INFORMATION

WARNING!!!
Carefully read before installing, powering or servicing.
Nothing to do if anything misunderstand!
Only for professional use!

01.1 Safety instructions

- Shut down power before installation or maintenance.
- Do not modify, alter, or attempt to service the LeaderLight appliance. Doing so will void the warranty.
- Use only with Leader Light LED Z-POWER or TOP LED products.
- Use only with recomended by Leader Light DC power supply.
- We recomended the earth on the bottom of box has to be connected!
- The electric connection, repairs and servicing must be carried out by a qualified employee.
- Do not connect this unit to any dimmers.
- AC power for DC power supply must complies with local building and electrical rules.
- AC power has to have both overload and short circuit protection.

Operate only with DC 24V source with 0-100% current output!

01.2 Operating determination

- The unit operate only with Leader Light LED Z-POWER and TOP LED products.
- This product was designed for **indoor use only.**
- If the unit has been exposed to drastic temperature fluctuation (e.g. after transportation), do not switch it on immediately. The arising condensation water might damage your unit. Leave the unit switched off until it has reached room temperature.
- Please make sure that the unit is not exposed to extreme heat, moisture or dust.
- The unit operate only after checking, that the housing is firmly closed and all screws are tightly fastened.
- Unprofessional operation creates the most damages!
- By product transport use the original packaging.

01.3 Fire prevention

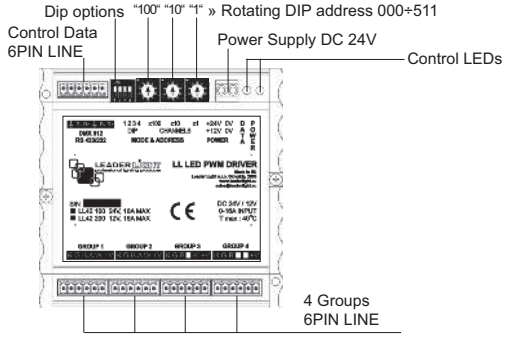
- Follow all safety consideration.
- Device never shield – minimum distance around must be 100mm (4 in.).
- Allowing max. ambient temperature is 40°C (104°F).

02 PRODUCT SPECIFICATION

02.1 Technical Specification

Power connection:	In: 0-16A, 24V DC, max. 16A Out: DC 24V PWM DIM
Control data connection:	DMX In/Out: 6pin LINE connector 12x LED Out: 4 groups each 3 channels
Net weight:	1,0 kg
Ambient temp.(Ta):	-10°C ~ +40°C except outdoor box with cooling and heating module
Control:	Protocol: USITT DMX512 Control options: DMX, Auto-trigger Operation modes: Stand alone Programs: test program
Dimensions LxWxH:	107mm x 105,4mm x 73,5mm
Installation:	DIN installation

02.2 Product labelling



Control LEDs Indication POWER DATA

LED	INDICATION	STATUS
POWER (Red)	blinking – 2Hz	OK - inside fixture is everything correct
DATA (Green)	light off	NO DMX512 signal
DATA (Green)	blinking – 4Hz	OK- income correct DMX512 signal
DATA (Green)	fast blinking	NON correct digital signal
POWER (Red)	alternate blinking	Autotest function
DATA (Green)		

03 INSTALLATION

03.1 Unpacking

- Unpack carefully.
- This is electronic equipment and should be handled carefully.
- Damaged delivered package or if are any mechanical parts broken – it must be claim immediately by the transport company. Photo pictures as evidence are valuable for future claim.

03.2 Physical installation

- Loading capacity of bearing area has to be at least 10 times the weight of all device clusters.

03.3 Connecting to DC power supply

- You can suffer a dangerous electric shock by using a high voltage AC/DC power supply - by touching AC/DC power supply the wires inside the unit!

03.4 Installation factors

- For any indoor and outdoor installation inside the installation box must be add +20mm each side and must be add ventilation modul. Specialy for outdoor installation must be add heating modul, if the outdoor temperature is less then 0°C any time!

03.5 Connection to the DC power input

- The LL LED Z-POWER DRIVER is equipped only for DC24V operating use.
- TOTAL current input is limited for 16A !!!
- We recomended the earth on the bottom of box has to be connected!

03.6 Connection possibility

- Shut down power supply before installation of DRIVER to LED fixtures.
- Total current output of DRIVER is limited for maximum 16A!
- Maximum LED fixtures connection to the LL LED PWM DRIVER see on figure 1.1.

03.7 DMX channels

- Shut down power supply before installation of DRIVER to LED fixtures.
- Total current output of DRIVER is limited for maximum 16A!

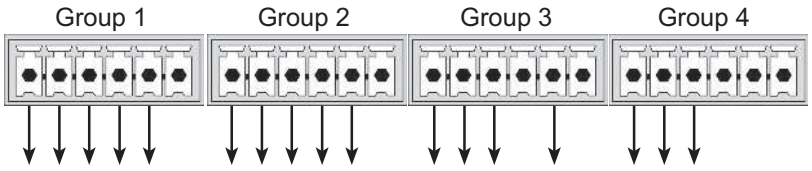
Mode 1: **DIP2=Off** and **DIP3=Off**		**Mode 2**: **DIP2=Off** and **DIP3=On**	
channel 1 =	Red 1	channel 1 =	Red 1
channel 2 =	Green 1	channel 2 =	Green 1
channel 3 =	Blue 1	channel 3 =	Blue 1
channel 4 =	Red 2	channel 4 =	White 1
channel 5 =	Green 2	channel 5 =	Red 2
channel 6 =	Blue 2	channel 6 =	Green 2
channel 7 =	Red 3	channel 7 =	Blue 2
channel 8 =	Green 3	channel 8 =	White 2
channel 9 =	Blue 3	channel 9 =	Red 3
channel 10 =	Red 4	channel 10 =	Green 3
channel 11 =	Green 4	channel 11 =	Blue 3
channel 12 =	Blue 4	channel 12 =	White 3

Mode 3: **DIP2=Off** and **DIP3=On**		**Mode 4**: **DIP2=On** and **DIP3=On**	
channel 1 =	Red 1	channel 1 =	Red 1
channel 2 =	Green 1	channel 2 =	Green 1
channel 3 =	Blue 1	channel 3 =	Blue 1
channel 4 =	Amber 1	channel 4 =	White 1
channel 5 =	White 1	channel 5 =	Amber 1
channel 6 =	Red 2	channel 6 =	Red 2
channel 7 =	Green 2	channel 7 =	Green 2
channel 8 =	Blue 2	channel 8 =	Blue 2
channel 9 =	Amber 2	channel 9 =	White 2
channel 10 =	White 2	channel 10 =	Amber 2

Extention and control functions:

Dip4=Off, Dip1=Off =>DipBCD:	use rotating switch for DMX start address (RS1 - “100“, RS2- “10“, RS3- “1“) from 001 to 512
DipBCD=9xx:	AutoTest: fade-over
DipBCD=8xx:	AutoTest: al channels on 50%
Dip1=On:	switch Paralel mode
Dip4=On:	switch UltraSoft curve
Dip2=Off, Dip3=Off:	Mode 1 (12ch) 4xRGB
Dip2=Off, Dip3=On:	Mode 2 (12ch) 3xRGBW
Dip2=On, Dip3=Off:	Mode 3 (10ch) 2xRGBAW
Dip2=On, Dip3=On:	Mode 4 (10ch) 2xRGBWA

1.1.



LL LED LINE		I_c (A)*												maximal fitting amound per LL LED DRIVER	
RGB/AWB	3x	0,35 = 1,05A	4			4			4			4		15	!max.16A
RGB/AWB	3x	0,70 = 2,10A	2			2			2			2		7	!max.16A
RGB/AWB	3x	1,40 = 4,20A	1			1			1			1		3	!max.16A
OneColour															
R/G/B/A/W/N	1x	0,35 = 0,35A	4	4	4	4	4	4	4	4	4	4	4	45	!max.16A
R/G/B/A/W/N	1x	0,70 = 0,70A	2	2	2	2	2	2	2	2	2	2	2	22	!max.16A
R/G/B/A/W/N	1x	1,40 = 1,40A	1	1	1	1	1	1	1	1	1	1	1	11	!max.16A
LL LED TopLED															
RGB	3x	0,02 = 0,06A	70			70			70			70		266	!max.16A
RGBW	4x	0,02 = 0,08A	70			70			70					200	!max.16A
RGBAW	5x	0,02 = 0,10A	70			70								140	!max.16A
LL LED Point+Splitter (6 x point)**															
RGB/AWB	3x	0,35 = 1,05A	6 x 4			6 x 4			6 x 4			6 x 4		15x6	!max.16A
R/A G/B/W/N	1x	0,35 = 0,35A	6 x 12			6 x 12			6 x 12			6 x 12		45x6	!max.16A

Note:
* I_c (A) - current for 1 colour ; ** for each LL LED POINT (RGB/AWB), (R/A), (G/B/W/N) use special LL LED POINT SPLITTER.
Recommended power supply by Leader Light - **MW 240/24** - only **10A!**

Connection conditions:

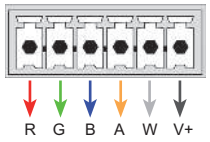
- Maximal current on DRIVER is 16A
- Maximal allowed current on each connector terminal is 1,4A
- Never use more fittings as maximal allowed amound
- LL LED Z-POWER DRIVER is calculated only for LL LED products

Amound of channels per LL LED Z-POWER DRIVER:

4x	RGB	12 channels
3x	RGBW	12 channels
2x	RGBAW	10 channels

or many another combinations

Group connection possibility



Standard LL cable has following cable cores:

RGBAW+Black, or RGB+Black.
Each colour is connected to corresponding colour.
In case AWB: RGB+Black (AWB is connected to RGB).

04 MAINTENANCE

- **To tackle all Safety Information- 01!**
- Damage caused by inadequate cleaning or maintenance is not coverd by warranty.
- Regular cleaning is demand (dust, dirt, ...).

Maintenance policy:
- Unplug mains befor maintenance and at least 10 minutes cool off.
- Cleanup dust from appliance.
- Use vacuum or dampy duster (warm watter).
- Before reinstalling to check failure-free state – no wet parts!